



TiM240-2050300

TiM

2D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
TiM240-2050300	1104981

Other models and accessories → www.sick.com/TiM



Detailed technical data

Features

Application	Indoor
Measurement principle	HDDM ⁺
Light source	Infrared (850 nm)
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
Aperture angle	
Horizontal	240 °
Scanning frequency	14.5 Hz
Angular resolution	
Horizontal	1 °
Working range	0.05 m ... 10 m
Scanning range	
At 10% remission factor	2.8 m ... 3 m, depending on the angle

Mechanics/electronics

Connection type	1 x "Ethernet" connection, 4-pin M12 female connector 1 x connection "Power", 5-pin, M12 male connector
Supply voltage	10 V DC ... 28 V DC
Power consumption	Typ. 2.9 W
Output current	≤ 100 mA
Housing color	Light blue (RAL 5012)
Enclosure rating	IP65 (IEC 60529:1989+AMD1:1999+AMD2:2013)
Protection class	III (IEC 61140:2016-1)
Weight	150 g, without connecting cables
Dimensions (L x W x H)	60 mm x 60 mm x 75.8 mm
MTBF	50 years

Safety-related parameters

MTTF _D	> 100 years
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Performance

Response time	Typ. 70 ms
Detectable object shape	Almost any
Systematic error	$\pm 40 \text{ mm}^{1)}$
Statistical error	$30 \text{ mm}^{1)}$
Integrated application	Output of measurement data

¹⁾ Typical value; actual value depends on environmental conditions.

Interfaces

Ethernet	✓, TCP/IP
Digital inputs/outputs	Inputs
	0
	Outputs
	1 (Push-pull, "Device Ready")
Optical indicators	2 LEDs ("device ready")

Ambient data

Object remission	4 % ... 1,000 % (reflectors)
Electromagnetic compatibility (EMC)	IEC 61000-6-3:2006+AMD1:2010 / IEC 61000-6-2:2005
Vibration resistance	Sine resonance scan
	10 Hz ... 1,000 Hz ¹⁾
	Sine test
	10 Hz ... 500 Hz, 5 g, 10 frequency cycles ¹⁾
	Noise test
	5 Hz ... 250 Hz, 4.24 g RMS, 5 h ²⁾
Shock resistance	25 g, 6 ms, $\pm 1,000$ continuous shocks/axis ³⁾
	50 g, 3 ms, $\pm 5,000$ continuous shocks/axis ³⁾
	50 g, 3 ms, ± 3 single shocks/axis ³⁾
Ambient operating temperature	-10 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Ambient light immunity	30,000 lx

¹⁾ IEC 60068-2-6:2007.

²⁾ IEC 60068-2-64:2008.

³⁾ IEC 60068-2-27:2008.

General notes

Note on use	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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Certificates

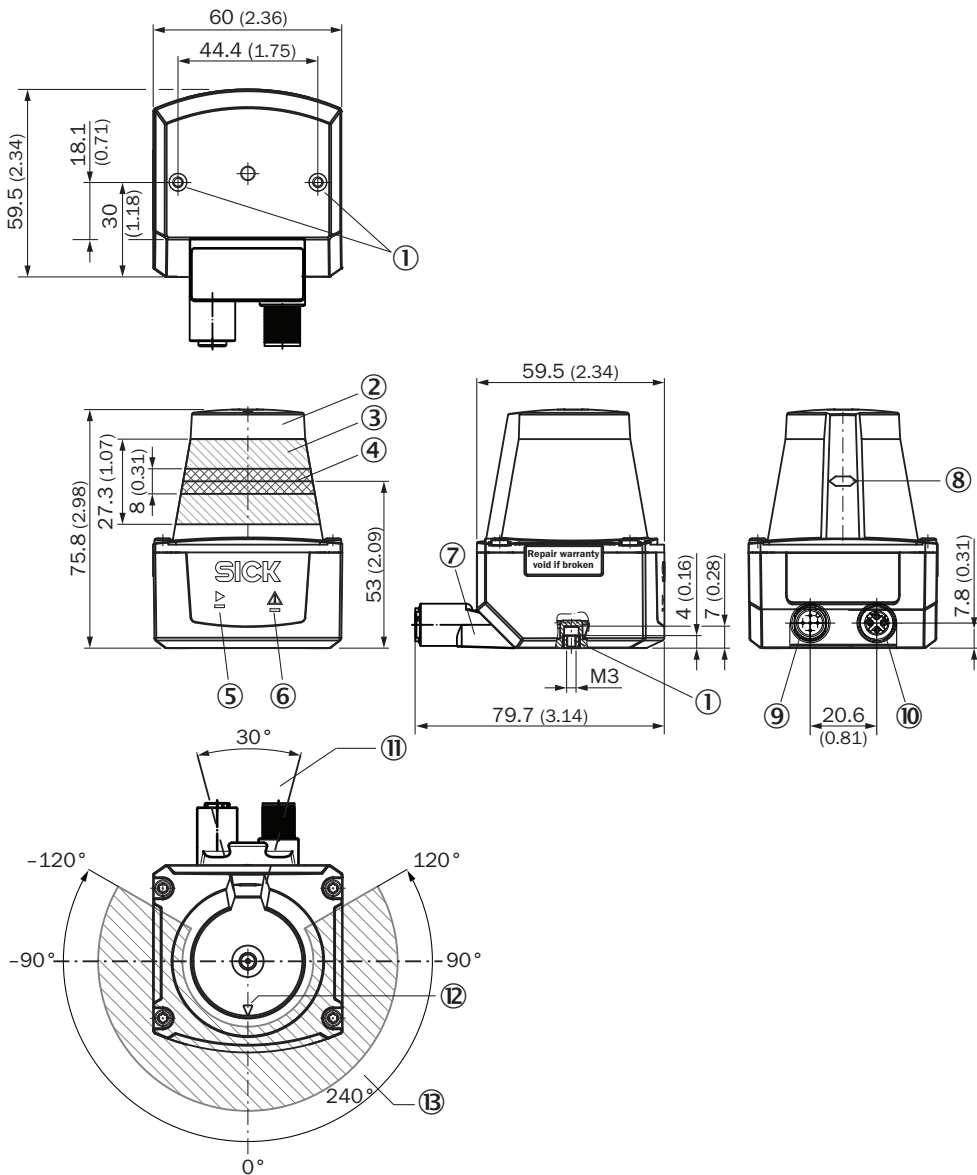
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China-RoHS	✓
cTUVus certificate	✓

Classifications

ECLASS 5.0	27270990
ECLASS 5.1.4	27270990

ECLASS 6.0	27270913
ECLASS 6.2	27270913
ECLASS 7.0	27270913
ECLASS 8.0	27270913
ECLASS 8.1	27270913
ECLASS 9.0	27270913
ECLASS 10.0	27270913
ECLASS 11.0	27270913
ECLASS 12.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
UNSPSC 16.0901	41111615

Dimensional drawing






Dimensions in mm (inch)

- ① M3 threaded mounting hole, 2.8 mm deep (blind hole thread), max. tightening torque 0.7 Nm
- ② Optical hood
- ③ Receiving range (light inlet)
- ④ Transmission range (light emission)
- ⑤ green LED
- ⑥ red LED
- ⑦ Swivel connector unit with electrical connections (9) and (10)
- ⑧ Marking for the position of the light emission level
- ⑨ connection "Power/Synchronization output" 5-pin, M12 male connector
- ⑩ "Ethernet" connection, 4-pin M12 female connector
- ⑪ Area in which no reflective surfaces are allowed for mounted devices
- ⑫ bearing marking to support alignment (0° axis)
- ⑬ 240° aperture angle (visual range)

Recommended accessories

Other models and accessories → www.sick.com/TiM

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none">• Connection type head A: Female connector, M12, 5-pin, straight, A-coded• Connection type head B: Flying leads• Signal type: Power• Cable: 5 m, 4-wire, PUR, halogen-free• Description: Power, shielded• Connection systems: Flying leads	YF2A64-050XXXXLEAX	6036159
	<ul style="list-style-type: none">• Connection type head A: Male connector, M12, 4-pin, straight, D-coded• Connection type head B: Male connector, RJ45, 4-pin, straight• Signal type: Ethernet, PROFINET• Cable: 5 m, 4-wire, PUR, halogen-free• Description: Ethernet, shieldedPROFINET• Application: Drag chain operation, Zones with oils and lubricants	YM2D24-050P-N1MRJA4	2106184
Mounting systems			
	<ul style="list-style-type: none">• Description: Mounting kit	Mounting kit	2082188

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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